

BMP #138 - Portable Sediment Tank

DESCRIPTION

A sediment tank is a compartmented tank container through which sediment laden water is pumped to trap and retain the sediment prior to pumping the water to drainageways, adjoining properties, and rights-of-way below the sediment tank site.

APPLICATIONS

A sediment tank should be used on sites where excavations are deep, and space is limited, such as urban construction, where direct discharge of sediment laden water to stream and storm drainage systems is to be avoided.

DESIGN PARAMETERS

Location: The sediment tank shall be located for ease of clean-out and disposal of the trapped sediment, and to minimize the interference with construction activities and pedestrian traffic.

Tank Size: The following formula should be used in determining the storage volume of the sediment tank:
Pump Discharge (G.P.M.) x 16 = Cubic Foot Storage.

An example of a typical sediment tank is shown in on the attached drawing. Other container designs can be used if the storage volume is adequate and approval is obtained from the local approving agency.

Targeted Pollutants

- ☒ Sediment
- ☐ Phosphorus
- ☒ Trace metals
- ☐ Bacteria
- ☐ Petroleum hydrocarbons

Physical Limits

Drainage area 5

Max slope NA

Min bedrock depth NA

Min water table NA

SCS soil type NA

Freeze/Thaw good

Drainage/Flood control no

INSTALLATION GUIDELINES

Follow manufacturer's specifications.

VARIATION WITH FLOCCULATION

The pollution removal efficiency of the sediment tank can be considerably increased by using flocculation chemicals, such as alum (aluminum sulfate) in the tank. Flocculation will allow some very small suspended solids to settle that otherwise would never be removed. The time it takes to settle out larger particulates will also decrease. However, a flocculation tank setup is considerably more complicated as the rate of flocculant addition must be carefully monitored.